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10/774,220	02/06/2004	Thomas J. Vanderwiel	60000500-1007	8115

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EXAMINER
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SHECHTMAN, SEAN P

ART UNIT	PAPER NUMBER
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2125

DATE MAILED: 05/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/774,220

Applicant(s)

VANDERWIEL, THOMAS J.

Examiner

Sean P. Shechtman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-67 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-67 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/6/04; 2/6/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/6/04.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. Claims 1-67 are presented for examination.

#### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9, 26, 32, 33, 42, 60, 66, 67, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

2. Claims 9 and 42 recite the limitation "said inputs to said batch job" in lines 1-2. There is insufficient antecedent basis for this limitation in the claims.

3. Claims 32 and 66 recite the limitation "the design" in line 2. There is insufficient antecedent basis for this limitation in the claims.

4. Claim 42 recites the limitation "said re-launching" in line 2. There is insufficient antecedent basis for this limitation in the claim.

5. The term "almost any" in claim 26 and 60 is a relative term which renders the claim indefinite. The term "almost any" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The two-dimensional wireframe profile has been rendered indefinite by the use of the term almost any.

6. The term "highly" in claim 33 and 67 is a relative term which renders the claim indefinite. The term "highly" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be

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reasonably apprised of the scope of the invention. The contoured parts have been rendered indefinite by the use of the term highly.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 1-33 are rejected under 35 U.S.C. 101 because the claim recites a method of creating a sketch-based eggcrate substructure. However, the claim describes the method as an abstract idea, without need for physical computing equipment and therefore constitutes non-statutory subject matter. Examiner suggests the use of “computer-implemented method” in place of “method” in order to make the claim describe statutory subject matter.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1, 5, 6, 10-14, 18-23, 34, 38, 39, 43-47, 51, 52, 54-57, are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pat. No. 6,775,585 to Bedont, Jr. et al (hereinafter referred to as Bedont).

Referring to claims 1 and 34, Bedont teaches a creating an input model from a plurality of inputs (Col. 5, lines 49-57; Col. 5, lines 66-67; Col. 6, lines 39-51); and launching a batch job of said created input model (Col. 7, lines 36-62; Col. 8, lines 62-67; Col. 9-10).

Referring to claims 5 and 38, Bedont teaches a method and apparatus in accordance with claim 1 wherein said inputs are stored and retrievable (Col. 7, lines 36-39; Col. 5, lines 49-64).

Referring to claims 6 and 39, Bedont teaches a method and apparatus in accordance with claim 1 wherein said batch job is launched from a web page (Col. 7, lines 36-39).

Referring to claims 10 and 43, Bedont teaches a method and apparatus in accordance with claim 1 further comprising obtaining an output model by running said batch job (Col. 7, lines 54-62).

Referring to claim 11 and 44, Bedont teaches a method and apparatus in accordance with claim 10 wherein said output model contains both three-dimensional space and two-dimensional draw geometry (Abstract; line 7).

Referring to claim 12 and 45, Bedont teaches a method and apparatus in accordance with claim 10 further comprising displaying said output model for review (Col. 7, line 63).

Referring to claim 13 and 46, Bedont teaches a method and apparatus in accordance with claim 12 further comprising receiving verification that said output model is acceptable (Abstract).

Referring to claim 14 and 47, Bedont teaches a method and apparatus in accordance with claim 13 further comprising merging an ITS spec sheet into an output model tool drawing (Col. 2, lines 61-64).

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Referring to claim 18 and 51, Bedont teaches a method and apparatus in accordance with claim 12 further comprising changing said inputs when said output model is unacceptable, said changed inputs including three-dimensional sketch and at least one of web and interactive inputs (Col. 3, lines 34-44).

Referring to claim 19 and 52, Bedont teaches a method and apparatus in accordance with claim 18 further comprising repeating said batch job with said changed inputs (Col. 7, line 63 – Col. 8, line 3).

Referring to claim 20 and 54, Bedont teaches a method and apparatus in accordance with claim 18 wherein a display of said input model is interactively and simultaneously changed upon each changed input entry (Col. 5, lines 24-27; Col. 6, lines 39-51).

Referring to claim 21 and 55, Bedont teaches a method and apparatus in accordance with claim 1 wherein said inputs include at least one of CAD and web inputs (Col. 4, lines 3-4).

Referring to claim 22, 23, 56, 57, Bedont teaches a method and apparatus in accordance with claim 1 wherein said inputs include Output Options (Col. 6, lines 12-13; Col. 10, lines 1-3).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2-4, 24-26, 32, 35-37, 58-60, 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,775,585 to Bedont as applied to claims 1, 5, 6, 10-14, 18-23, 34, 38, 39, 43-47, 51-57 above, and further in view of U.S. Pat. No. 4,697,240 to Cedar.

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Referring to claims 2 and 35, Bedont teaches all of the limitations disclosed above, however fails to teach the input model is created using inputs including locations that are inexact and incomplete.

Referring to claims 3 and 36, Bedont teaches all of the limitations disclosed above, however fails to teach the input model includes a periphery having at least one of a plurality of sides and intersections.

Referring to claims 4 and 37, Bedont teaches all of the limitations disclosed above, however fails to teach the input model includes lines lying in at least one of a same and different planes.

Referring to claim 24 and 58, Bedont teaches all of the limitations disclosed above, however fails to teach the input model contains said three-dimensional sketch used to generate eggcrate supports.

Referring to claim 25 and 59, Bedont teaches all of the limitations disclosed above, however fails to teach the cutout areas made from input solids are always perpendicular to a support.

Referring to claim 26 and 60, Bedont teaches all of the limitations disclosed above, however fails to teach the fillets can be made for almost any two-dimensional wireframe profile in a predictable manner, even when part of the profile must be removed.

Referring to claim 32 and 66, Bedont teaches all of the limitations disclosed above, however fails to teach the solids can be used to represent the placement of any non-eggcrate part in the design and eggcrate features will be generated to accommodate these parts in the design.

However, Cedar teaches analogous art, wherein referring to claims 2 and 35, Cedar teaches an input model is created using inputs including locations that are inexact and incomplete (Col. 3, lines 22-32).

Referring to claims 3 and 36, Cedar teaches the input model includes a periphery having at least one of a plurality of sides and intersections (Col. 3, lines 22-26; Figs 3-4).

Referring to claims 4 and 37, Cedar teaches the input model includes lines lying in at least one of a same and different planes (Fig. 3).

Referring to claim 24 and 58, Cedar teaches the input model contains said three-dimensional sketch used to generate eggcrate supports (Col. 3, lines 66- Col. 4, line 52).

Referring to claim 25 and 59, Cedar teaches the cutout areas made from input solids are always perpendicular to a support (Col. 4, lines 3-22).

Referring to claim 26 and 60, Cedar teaches the fillets can be made for almost any two-dimensional wireframe profile in a predictable manner, even when part of the profile must be removed (Col. 3, lines 66 – Col. 4, line 22).

Referring to claim 32 and 66, Cedar teaches the solids can be used to represent the placement of any non-eggcrate part in the design and eggcrate features will be generated to accommodate these parts in the design (Col. 4, lines 3-22).

Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to combine the teachings of Cedar with the teachings of Bedont.

One of ordinary skill in the art would have been motivated to combine these references because Cedar teaches using CAD/CAM techniques to digitally process surface data that can be used in conjunction with a coordinated pre-planning of all tooling aids and properties needed



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throughout the design cycle, and allows reliance on computer databases to move from one level or refinement to the next without starting all over again with drawings of scan lines when new properties need to be produced. Cedar teaches the same database can be constantly upgraded and properties can be produced by automatic means more quickly and economically (Col. 5, lines 18-60).

10. Claims 15-17, 48-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,775,585 to Bedont as applied to claims 1, 5, 6, 10-14, 18-23, 34, 38, 39, 43-47, 51-57 above, and further in view of U.S. Pat. No. 6,675,059 to Scott.

Referring to claim 17 and 50, Bedont teaches a method and apparatus further comprising: preparing a formatted output for NC Programming; and sending said formatted output to NC Programming (Col. 5, lines 9-14; Col. 10, lines 49-52).

Referring to claim 15 and 48, Bedont teaches all of the limitations disclosed above, however fails to teach adding a substructure flag note to a face of said output model tool drawing.

Referring to claim 16 and 49, Bedont teaches all of the limitations disclosed above, however fails to teach sending said ITS spec sheet to tool fabrication.

However, Scott teaches analogous art, wherein referring to claim 15 and 48, Scott teaches adding a substructure flag note to a face of said output model tool drawing (Col. 7, lines 9-41).

Referring to claim 16 and 49, Scott teaches a method and apparatus sending said ITS spec sheet to tool fabrication (Col. 4, lines 32-46).

Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to combine the teachings of Scott with the teachings of Bedont.

One of ordinary skill in the art would have been motivated to combine these references because Scott teaches a web interface that allows users to order customized equipment based on the customer supplied design specifications and allows nested parts information to be seamlessly transmitted to machining (Col. 1, lines 43-60).

11. Claims 7-9, 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,775,585 to Bedont as applied to claims 1, 5, 6, 10-14, 18-23, 34, 38, 39, 43-47, 51-57 above, and further in view of U.S. Pat. 5,321,835 to Tanaka.

Referring to claims 7 and 40, Bedont teaches a method and apparatus in accordance with claim 1 wherein when said batch job fails (Col. 7, line 63 – Col. 8, line 17).

Referring to claims 8 and 41, Bedont teaches a method and apparatus in accordance with claim 7 further comprising re-launching said batch job when said batch job fails (Col. 7, line 63 – Col. 8, line 17).

Referring to claims 9 and 42, Bedont teaches a method and apparatus in accordance with claim 8 further comprising verifying said inputs to said batch job prior to re-launching said batch job (Col. 7, line 63 – Col. 8, line 17).

Referring to claims 7-9, 40-42, Bedont teaches all of the limitations disclosed above, however fails to teach an error message is provided.

However, Tanaka teaches analogous art, wherein referring to claims 7-9, 40-42, Tanaka teaches when a batch job fails, an error message is provided (See cover figure; Col. 15, lines 50-Col. 16, line 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to combine the teachings of Tanaka with the teachings of Bedont.

One of ordinary skill in the art would have been motivated to combine these references because Tanaka teaches reducing rerun time by automating rerun processing and skipping rerun and file access of unnecessary jobs by storing access configurations from respective jobs to all the files, determining those jobs that require rerun automatically based on abovementioned access configurations, and further skipping unnecessary file access among rerun jobs. Further, there is an effect of inhibiting unnecessary rerun in a unit of job step by storing inheritance data between job steps and providing steps utilized at the rerun time. Further, there is an effect of preventing diffusion of the rerun job scope by storage device trouble and further reducing the rerun time by providing the step for controlling so that the files are stored in different storage devices in a unit of job or in a unit of job step. Furthermore, when a trouble occurs, in allocating a file, in the storage device in which the file is located, it is possible to localize the trouble influence scope even in case the number of the storage devices is less as compared with the number of files by selecting the same storage device as the file to which access is made by a job or a job step requiring rerun together with the job or the job step making access thereto. Furthermore, when storage devices corresponding to the number of files exist, it is possible to localize the influence scope by storage device trouble and to reduce the rerun time by reducing

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the rerun processing objects by allocating respective files to different storage devices to the utmost (Col. 15, lines 11-48).

12. Claims 27-31, 33, 53, 61-65, 67, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6,775,585 to Bedont as applied to claims 1, 5, 6, 10-14, 18-23, 34, 38, 39, 43-47, 51-57 above, and further in view of U.S. Pat. No. 5,701,403 to Watanabe.

Referring to claim 27 and 61, Bedont teaches all of the limitations disclosed above, however fails to teach the periphery header locations only need to be sketched.

Referring to claim 28 and 62, Bedont teaches all of the limitations disclosed above, however fails to teach the internal header locations only need to be sketched.

Referring to claim 29 and 63, Bedont teaches all of the limitations disclosed above, however fails to teach the internal intercostals locations only need to be sketched.

Referring to claim 30 and 64, Bedont teaches all of the limitations disclosed above, however fails to teach the snap-to diagonal locations only need to be sketched.

Referring to claim 31 and 65, Bedont teaches all of the limitations disclosed above, however fails to teach the internal supports are one of trimmed and extended to other supports.

Referring to claim 33 and 67, Bedont teaches all of the limitations disclosed above, however fails to teach the support top edge is generated so that it only makes contact with a bottom of said tool face sheet even with highly contoured parts.

Referring to claim 53, Bedont teaches all of the limitations disclosed above, however fails to teach the changed inputs include a change in "type" of thickness.

However, Watanabe teaches analogous art, wherein referring to claim 27 and 61, Watanabe teaches the periphery header locations only need to be sketched. Referring to claim 28 and 62, Watanabe teaches the internal header locations only need to be sketched. Referring to claim 29 and 63, Watanabe teaches the internal intercostals locations only need to be sketched. Referring to claim 30 and 64, Watanabe teaches the snap-to diagonal locations only need to be sketched. Referring to claim 31 and 65, Watanabe teaches the internal supports are one of trimmed and extended to other supports. Referring to claim 33 and 67, Watanabe teaches the a support top edge is generated so that it only makes contact with a bottom of said tool face sheet even with highly contoured parts (Fig. 3-60).

Referring to claim 53, Watanabe teaches the changed inputs include a change in "type" of thickness (Col. 14, lines 21-39).

Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to combine the teachings of Watanabe with the teachings of Bedont.

One of ordinary skill in the art would have been motivated to combine these references because Watanabe teaches a CAD system that allows users to perform 3-d shaping operation without thinking of how to manipulate a complicated 3-d operation required for local operation in order to obtain a desired product model. Furthermore, Watanabe teaches the time required to for users to manipulate a product model can be reduced and hence the efficiency of drawing work can be improved (Col. 49, lines 29-43).

### *Conclusion*

13. The prior art or art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents or publications are cited to further show the state of the art with respect to creating an input model from a plurality of inputs and launching a batch job of said created input model sharing a common assignee with the instant application.

U.S. Pat/Pub. No. 6,606,528 to Hagmeier.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean P. Shechtman whose telephone number is (571) 272-3754. The examiner can normally be reached on 9:30am-6:00pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SPS

Sean P. Shechtman

April 27, 2005



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